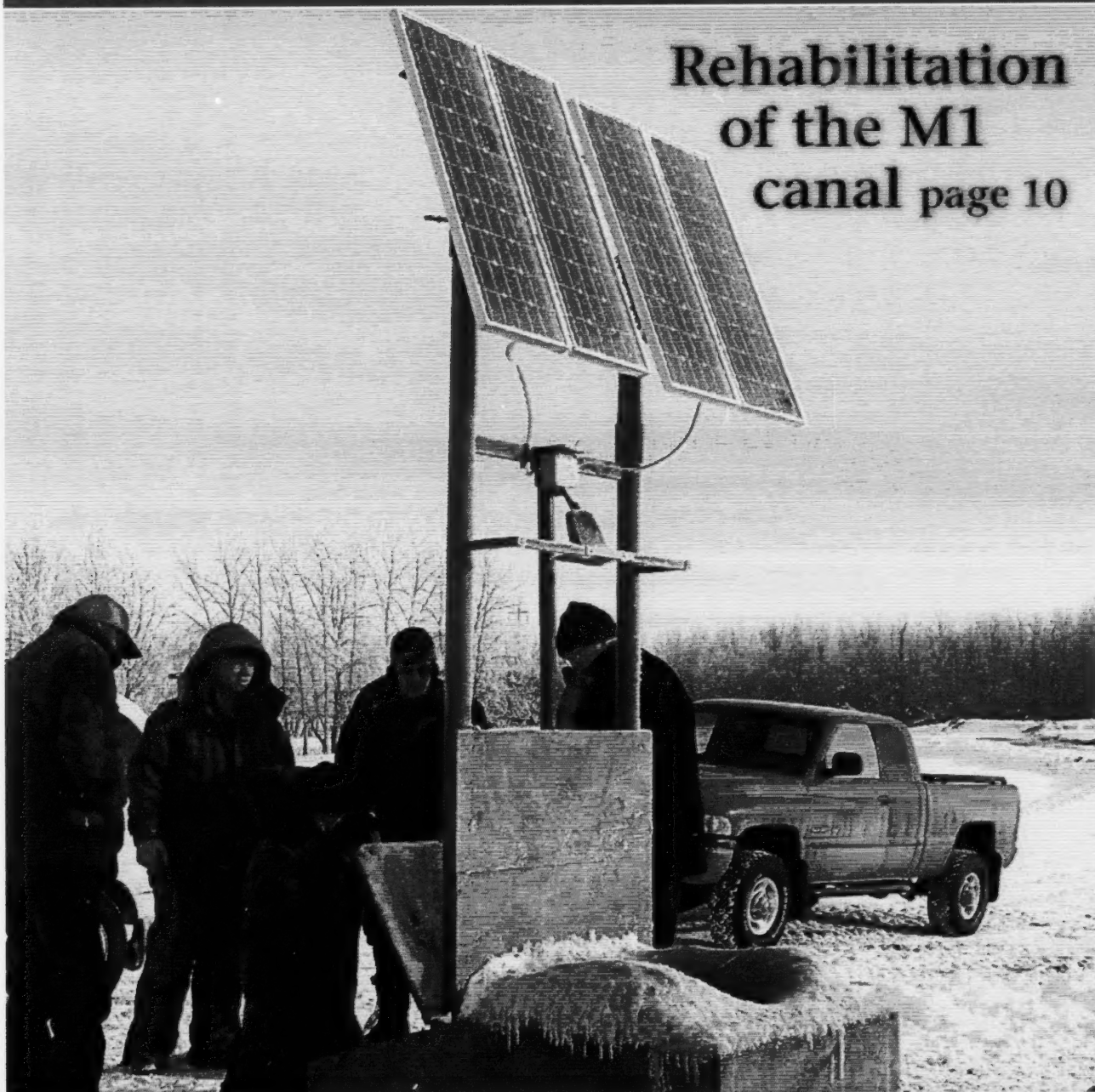


# AGRIVIEW

FEBRUARY 2012

VOLUME 7

**Rehabilitation  
of the M1  
canal page 10**



**SEED TESTING RESULTS** PAGE 5

**AGRICULTURAL CROWN LAND SALES PROGRAM** PAGE 11

**NEW AGRISTABILITY FORMS AVAILABLE** PAGE 14



Saskatchewan  
Agriculture

# Minister's Message



Saskatchewan is a leader in agriculture, both in production and research. We are home to world class facilities and a research community that continues to lead the way in agricultural innovation.

Research is also vital to the success of producers in Saskatchewan. Whether it is new crop varieties with improved disease resistance, new livestock vaccines, or improved feeding systems, research keeps our producers on the cutting edge of production.

As the world population grows, research will be more important than ever to ensuring our producers have the tools they need to continue meeting the demand for safe, reliable agriculture products, both at home and abroad.

Research is a priority for our government. We have increased our agriculture research budget by more than 30% since forming government in 2007.

Recently, in partnership with the federal government, we announced nearly \$11.8 million in research funding through our Agriculture Development Fund (ADF). This funding will go towards 60 crop, livestock, forage and other agriculture-related research projects.

Some of the projects that received funding include:

- improving yields and disease-resistance in wheat, barley and flax;
- increasing lentil yields and marketability through fertilization and genetic analysis;
- nutritional and quality analysis of peas, oats and saskatoon berries;
- reducing yield losses in pulse crops due to drought;
- increasing flax seed size to improve yields;
- identifying clubroot resistant genes in canola;
- identifying factors that cause blackleg disease in canola;
- improving genetics for forage crops;
- analyzing corn grazing methods to extend the grazing season;
- controlling prevalent and emerging diseases in poultry, cattle and swine;
- pellet quality, diet analysis and nutritional enhancements in cattle and bison;
- improving manure processing efficiency; and
- improving feed intake and growth of piglets.

Our goal is to fund research that will provide long-term benefits to producers at the farm gate. I hope the results of these projects will accomplish that goal for years to come.

Sincerely,

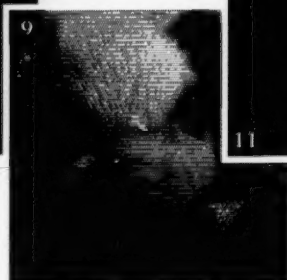
Bob Bjornrud



## STORY SNAPSHOTS



6 Cabbages seedpod weevil survey



Biosecurity



11 Crown Land Sales Program



Potato research

## TABLE OF CONTENTS

|   |                       |    |
|---|-----------------------|----|
|    | CROPS                 | 4  |
|    | LIVESTOCK             | 8  |
|  | IRRIGATION            | 10 |
|  | CROWN LANDS           | 11 |
|  | RESEARCH              | 12 |
|  | PROGRAMS AND SERVICES | 13 |
|  | EVENTS CALENDAR       | 16 |



Cover: Producers demonstrating winter watering options using solar technology.



**Saskatchewan  
Agriculture**

AGRIVIEW is published by the Communications Branch of Saskatchewan Agriculture for Saskatchewan farmers and farm and food organizations. For more information, call 306-787-5160 or e-mail [agriview@gov.sk.ca](mailto:agriview@gov.sk.ca). To view this publication online, visit [www.agriculture.gov.sk.ca/programs-services](http://www.agriculture.gov.sk.ca/programs-services).





# Spring 2011 put damper on grasshopper populations

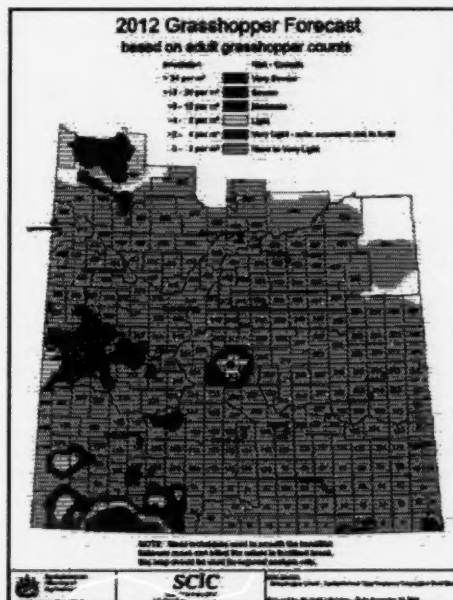


by Scott Hartley, PAg  
Provincial Specialist, Insect and Vertebrate Pests  
Crops Branch

The 2012 Grasshopper Forecast Map indicates low risk for this insect pest for most areas of Saskatchewan in 2012.

The wet and cool climatic conditions in Saskatchewan in the spring of 2011, especially in southern regions, were not favourable for grasshopper development. Other areas, that did not receive as much precipitation, particularly in west central and northwestern regions, noted higher populations of grasshoppers during the grasshopper survey in August and September. The highest risk areas leading into 2012 appear to be the northwest (Meadow Lake) and the southwest (Rural Municipalities 18 and 19) next to the U.S. border. Lighter infestations were noted south of Watrous and in the Kindersley area.

The forecast map is based on adult grasshopper populations observed in 2011 at approximately 1,175 sites. The fall survey, conducted by Saskatchewan Crop Insurance Corporation personnel, estimates the number of mature grasshoppers capable of reproduction and egg-laying prior to winter. This information is used to estimate the number of grasshopper eggs that survive the winter to hatch next spring and be of potential risk to crops in 2012.



The actual severity of grasshopper infestations in 2012 will depend primarily on weather conditions in the spring. Hot and dry conditions will favour growth and development of grasshoppers.

Growers should monitor for young grasshoppers in at-risk crops in the spring and early summer. For example, in lentil crops flowering and pod development stages are especially vulnerable to grasshopper feeding, with potential economic damage at levels of only two grasshoppers per square metre.

Keep in mind that not all grasshoppers are crop pests. The grasshopper survey is intended to consider annual species because they have a greater potential for rapid increase in populations.

Grasshoppers that are already winged adults before June, have coloured wings, or make audible sounds are considered "non-pest" species. Many in this group can take two years to complete their life-cycle and do not tend to increase to economically damaging numbers.

The survey and risk map are intended to provide general information on risk levels. Actual levels of grasshopper infestations in individual fields may differ from those predicted in the 2012 forecast map.

FOR MORE INFORMATION, and updates throughout the 2012 growing season:

- Contact the Agriculture Knowledge Centre at 1-866-457-2377.

## CANOLA PLANT POPULATIONS: NEW FINDINGS FOR HIGHER PRODUCTIVITY



by Sherrilyn Phelps, M.Sc., PAg, CCA  
Regional Crops Specialist, North Battleford  
Regional Services Branch

Canola is an important crop to many producers and targeting optimum yield is critical. We know that hybrid canola is very resilient and can compensate under low plant populations, yet consistent data for producers to make more informed decisions on the yield-potential of reduced stands is lacking.

Research has shown that yields are more closely linked to plant population than they are to actual seeding rate. Canola plant populations growing at 40 to 200 plants per square metre have been shown to yield similar harvests in a number of research trials. However, we have little information on yield potential below 40 plants per square metre. Besides reduced yield, other drawbacks to low plant populations include reduced weed competition, extended maturity, and increased lodging. Root maggot infestations are also suggested to be higher on the larger plants in low-plant populations.

In 2010, a research project funded by SaskCanola and Saskatchewan Crop Insurance Corporation was initiated by Western Applied Research Corporation. The objective of this project is to look at the plasticity of

hybrid canola and evaluate the yield response at a range of plant populations from five to 300 plants per square metre.

The project is being executed at five locations within Saskatchewan including Indian Head, Melfort, Saskatoon, Scott, and Swift Current. The project has currently entered its third and final year and preliminary results demonstrate the tremendous plasticity of hybrid canola. Pod counts were affected by plant counts. At 80 plants per square metre, plants had an average of 138 pods, while at five plants per square metre, some plants had over 2,000 pods. The yield data is still under evaluation.

There can be many causes of low plant populations and this project is not about recommending lower seeding rates. It is rather about providing more information on the response of new hybrids in their ability to recover. For producers this means they will be better informed and have greater information on which to base their reseeding decisions.

### FOR MORE INFORMATION

- Contact your Regional Crops Specialist; or
- Visit the Ministry of Agriculture website at [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca).



# Interpreting seed testing results



by Faye Dokken-Bouchard, MSc., AAg  
Provincial Specialist, Plant Disease  
Crops Branch

In 2010, seed-borne diseases were detected at unprecedented levels in seed samples tested in Saskatchewan.

*Fusarium* in particular was prevalent, largely due to excess moisture conditions that spread the fungus late in the season. Average *Fusarium* infection rate in 2010 was 19 per cent (4.2 per cent *F. graminearum*) in cereal seed according to a provincial survey of seed testing labs (Canadian Plant Disease Survey, volume 91).

Most pea seed had low levels of disease in 2010, but much of the lentil seed was infected with one or more of the pathogens causing ascochyta blight, anthracnose, and seedling blights (*Botrytis*, *Sclerotinia* and *Fusarium*). As a result, finding cereal and pulse seed suitable for planting was an issue last season, and growers should use caution if considering carryover seed for the 2012 season.

Early reports show that seed quality improved in 2011, but seed testing is recommended as provincial averages can disguise individual seed-borne infection levels. Growing conditions, crop rotation history, disease records, and seed test results should be considered for each field. Thresholds for seed-borne disease levels (see table below) can be used to determine whether the seed is suitable for planting and under what circumstances a seed treatment should be considered.

## FOR MORE INFORMATION

- Contact your seed analyst, agronomist, or local Ministry of Agriculture Regional Crop Specialist concerning seed test result interpretation;
- Visit [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca) and search "seed-borne diseases"; or
- Contact the Agriculture Knowledge Centre at 1-866-457-2377.

| DISEASE  | THRESHOLD | ACTION   |
|--|-----------|--|
|  |           | <i>F. graminearum</i> -infected seed:<br>Do not bring seed into fields where <i>F. graminearum</i> is uncommon, unless the seed has been tested.               |
| Seedling blight caused by<br>Seed-borne <i>Fusarium</i><br>in wheat and barley                               | >5%       | Use other seed source  |
|  | 2-3%      | Use seed treatment   |
|  |           | Other <i>Fusarium</i> species-infected seed:<br>Only use seed with strong germination as emergence may be reduced if seed has high levels of <i>Fusarium</i> . |
|  | >5%       | Use seed treatment   |
| Chickpea: Ascochyta blight<br>( <i>Ascochyta rabiei</i> )  | 0.3%      | Do not use as seed   |
| Lentil: Ascochyta blight<br>( <i>Ascochyta lentis</i> )  | 5%        | Use seed treatment   |
|  | 10%       | Do not use as seed   |
| Field pea: Ascochyta complex   | 10%       | Use seed treatment   |
| All pulses: Seed rot and<br>seedling blight<br>( <i>Botrytis</i> + <i>Sclerotinia</i> +<br><i>Fusarium</i> ) | 10%       | Use seed treatment   |

## CROP REPORT: SASKATCHEWAN AGRICULTURE'S MOST SOUGHT-AFTER PUBLICATION



by Daphne Cruise, PAg  
Regional Crops Specialist, Moose Jaw  
Regional Services Branch

The Crop Report provides critical information not only to the Ministry of Agriculture, but also to many agricultural companies, organizations and individuals from around the world.

Although the publication has fallen under a few different names and jurisdictions in the past, the value of the report and its contributors has stayed the same. In fact, the Crop Report is the Ministry's most popular publication.

The Crop Report has relied on an impressive number of volunteers for information since 1974 and now is your chance to be part of it. Volunteer farmers, retired farmers and those interested in primary agriculture provide Saskatchewan Agriculture with information during the growing season including precipitation amounts, seeding progress, crop damage along with the progress, yields and grades of harvest and haying.

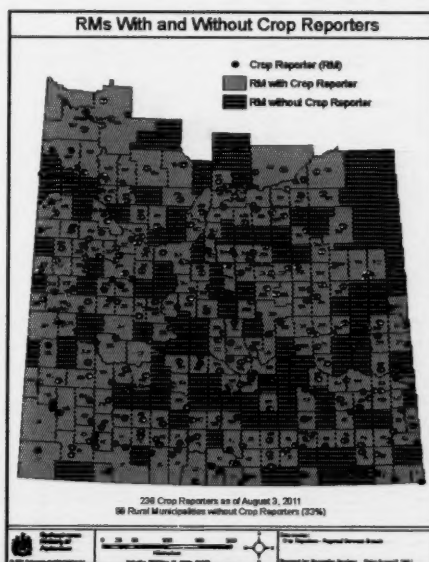
Each week, from seeding to harvest, 230 crop reporters use phone, fax or email to submit timely reports from across the province. The Ministry then compiles the information into the weekly Crop Report that is in turn used by radio, television, newspapers and other media outlets to discuss cropping conditions with Grant McLean, Saskatchewan Agriculture's Cropping Management Specialist.

In 2011, the Ministry gained 23 new crop reporters, a great addition to our network of volunteers. However, more crop reporters are still needed because there are still RMs without coverage. The Crop Report has a reputation as being one of the best cropping condition reports and by having at least one crop reporter in every RM, we will gather more information and the Crop Report will become even more precise and accurate.

This map shows areas in the province where crop reporters are located and areas where crop reporters are needed. If you are interested in becoming a crop reporter for the Ministry of Agriculture, give us a call. A valued crop reporter may be needed in your RM.

## FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit the Ministry website at [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca).





# Forage seed markets complex, but reduced inventory is increasing prices



by Michel Tremblay, PAg  
Provincial Specialist, Forage Crops  
Crops Branch

Like most other agricultural commodities, forage seed markets are cyclical in nature, with prices rising and falling in relation to supply and demand. However, the forage seed cycle is not as predictable as many other agricultural commodities.

Because of the lead time required to establish a perennial seed crop and harvest seed from it, forage seed stocks can react slowly to market signals. Natural disasters, climatic factors and economic conditions can influence seed prices. Reclaiming flooded areas and forest fire burns, and even increased new house construction all increase demand for seed. Public policy can have profound effects on price and availability of some species. Land conversion programs often specify the species acceptable for use in the program. Large conversion programs can result in the seeding of millions of pounds of seed in a single season, creating significant price changes in short periods of time, and making it difficult for the industry to react effectively.

The forage and amenity seed industry is characterized by a large number of species, some of which have very small markets. Both crop failures and surplus production can cause large fluctuations in prices of species with small markets.

Forage seed grown in Saskatchewan is largely marketed in Canada, the U.S. and Europe. In recent years, weak economic conditions and lack of profitability within the livestock sector has reduced demand for

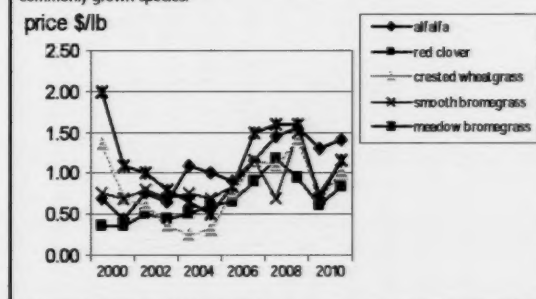
forage seed. Increased commodity prices, particularly for canola, have resulted in forage seed acres being seeded to more profitable annual crops. This means that stocks of many forage seed species are becoming low, creating an upward trend in pricing. Increased cattle prices may also result in increased forage seed prices, as producers purchase seed to renew forage stands.

Forage seed production has been a small but steady mainstay of Saskatchewan's agriculture industry. Strengthening prices will be required to allow forage seed production to be an economically viable option compared to annual crops.

## FOR MORE INFORMATION

- Visit the Saskatchewan Agriculture website at [www.agriculture.gov.sk.ca/crops](http://www.agriculture.gov.sk.ca/crops).

Figure 1. Saskatchewan forage seed prices (common seed, price to grower) for commonly grown species.



## 2011 CABBAGE SEEDPOD WEEVIL SURVEY

by Scott Hartley, PAg  
Provincial Specialist, Insect and Vertebrate Pests  
Crops Branch

The most severe infestations of the cabbage seedpod weevil are largely in southwest Saskatchewan. However, this pest continues to spread in the province as observed in the 2011 Cabbage Seedpod Survey map.

Compared to previous years, the 2011 survey map indicates a larger area of potentially economic levels of the weevil in the southwest. A broad area of higher infestations extends east into the south central region, including the Rural Municipality (RM) of Wheatlands 163 and northwest of Moose Jaw (RMs 193 and 194).

The cabbage seedpod weevil is a pest of cruciferous crops, primarily canola, but also brown and oriental mustard. Yellow mustard is considered resistant to the weevil. Since 2007, when this pest weevil was first found in the southwest, the weevil has expanded its distribution annually. Its range has mostly increased toward the east. While new records of cabbage seedpod weevil have been confirmed further north in the province (RMs 317, 318, 320 and 442), no major populations have been collected in regions north of the South Saskatchewan River.

Crop damage can occur in several ways. In spring, adults migrate from weed hosts to flowering fields and feed on buds, causing bud-blasting. The females lay eggs onto developing pods. After hatching, a weevil larvae feeds within the pod and can consume about five seeds during its development (about 15 to 20 per cent of the total yield of a pod). When the larvae are mature they chew a hole through the pod wall

and drop to the ground to pupate. There is potential of premature shattering of damaged pods.

Planting a non-host crop (e.g. cereals) will avoid cabbage seedpod weevil damage. If canola or another susceptible crop is grown, an insecticide application may be required. A sweep net should be used to monitor for the weevil, and the economic threshold for control action is two to three weevils per sweep on average. Cabbage seedpod weevils tend to keep close to the ground during windy days, so it's important to scout for the insect when winds are light.

Agriculture and Agri-Food Canada, coordinates and conducts the annual survey for this weevil out of its Saskatoon office, with assistance from Saskatchewan Agriculture.

## FOR MORE INFORMATION

- Visit the Ministry of Agriculture website at [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca) | Programs and Services | maps section; or
- Call the Agriculture Knowledge Centre at 1-866-457-2377.





# Plan now to attend Croportunities 2012



by Shannon Chant, MSc., PAg  
Regional Crops Specialist, Swift Current  
Regional Services Branch

A short- and long-term crop management plan for your farm is a great way to help reduce risk and maximize profit. The plan for your farm does not need to be set in stone and should always be flexible. The development of a well-thought-out plan will always help when decisions need to change due to unforeseen circumstances.

Winter and early spring are great times to learn, prepare and change your plan. There is more time and less stress than during the growing season, and you can leave a bit of time to think things through, do some research, contact specialists or talk to other parties that might be involved in your farm. There are lots of great sources of information, including meetings, fact sheets and one-on-one consultation with local agronomists.

A number of groups have been working together to host Croportunities 2012. The event is a great opportunity to get together with researchers, industry, extension staff and fellow producers to learn something new that could contribute to the profitability of your farm.

This spring, Croportunities 2012 will be held in Swift Current on March 6 at the Sky Centre, Living Sky Casino.

Presentations will be given on the following topics:

- The 2012 weather outlook from Drew Lerner of World Weather Inc.;
- Macro- and micro-nutrients;
- Crop rotation and fertility;
- Research at Wheatland Conservation Area; and
- An update from Saskatchewan Crop Insurance Corporation.

A variety of organizations and agencies will have booths set up at the event to provide the latest information.

## FOR MORE INFORMATION

- Contact Shannon Chant, Regional Crops Specialist at (306) 778-8291; or
- To register for Croportunities 2012, contact the Saskatchewan Agriculture Regional Office in Swift Current at (306) 778-8285.



Attending Croportunities can help you to make important decisions this spring and summer.

## CROP PROTECTION LABORATORY: CUTTING-EDGE SERVICE



by Dr. Philip Northover, Ph.D., AAg  
Supervisor, Crop Protection Lab  
Crops Branch

While the upcoming growing season is still months away, it hasn't been quiet at the Crop Protection Laboratory. The sounds of construction have died down as the renovations and an upgrade of the laboratory equipment has been completed, which will allow new services to be added in future years.

The lab is gaining the ability to test for some pests and pathogens that are difficult to culture or identify by more conventional methods. The changes to the laboratory will not only enable the use of DNA-based testing and long-term storage of organisms, but also rapid diagnoses and a number of potential options. These improvements will be gradual and ensure that the Lab will continue to develop services for use in solving crop-related problems.

Here is a quick summary of the fall and winter to date at the Lab:

The Fusarium Head Blight Survey has been completed, which examined the levels of the disease in wheat and barley fields in areas throughout Saskatchewan this year.

Herbicide-resistance testing is underway, and will continue until June. The deadline for submission of weed samples to the Crop Protection Laboratory to ensure resistance testing in 2012 is March 30, 2012. Samples arriving after that date will be processed in 2013. If you wish

to submit a sample, please check the Crop Protection Laboratory website and fill out the most recent submission form. Please note that the "all in one form" used for many years is out of date; all Lab services now have separate forms.

## FOR MORE INFORMATION

- Visit our website at [www.agriculture.gov.sk.ca/Crop\\_Protection\\_Lab](http://www.agriculture.gov.sk.ca/Crop_Protection_Lab), which includes forms and instructional videos; or
- Contact the Crop Protection Laboratory at (306) 787-8130; or
- E-mail [croplab@gov.sk.ca](mailto:croplab@gov.sk.ca).



Dr. Northover examines hundreds of cultures of Fusarium fungi to be identified for the Fusarium Head Blight survey.







## From inventory to implementation – the importance of a grazing plan



Nadia Mori, MSc, PAg,  
Regional Forage Specialist, Watrous  
Regional Services Branch

Whether it's developing more options for winter grazing or reducing labour requirements, a strong grazing plan can help.

The following four steps can help when developing your grazing plan:

### Set realistic, achievable outcomes

Know what you wish to achieve in the long-term. For example, you may want to improve pasture condition to increase long-term forage production. A key management activity could be to delay grazing until mid-June on tame pasture or until July 1 on native pasture. This allows grasses to recover from previous grazing events and avoid plant stress during a critical growth period.

### Inventory and map your pasture

Start with a visual inventory of the land being managed. Aerial maps are best but satellite imagery is also available. Outline paddocks, fence-lines, watering sites, and handling facilities. Describe range sites (e.g. sandy range site) and range condition (e.g. fair or good) and

identify the vegetation present in each paddock. Calculate your forage supply by using stocking rate guides. Finally, balance your forage supply with your animal requirements.

### Develop a plan of action

Talking to a forage specialist will help to provide you with possible options to reach your goals and will help identify various range management practices that you can use.

### Monitor and evaluate your progress

Be adaptive in your management approach. Environmental variations such as drought or excess moisture can force you to change management activities however your long-term outcomes should remain relatively stable. Maybe a long-term outcome is to manage for periodic drought. Yearly monitoring and repeating the inventory process on a three-to-five-year basis provides valuable feedback on the effectiveness of your grazing plan and indicates where adjustments may be warranted.

### FOR STOCKING RATE GUIDES OR FOR MORE INFORMATION

- Contact a Regional Forage Specialist near you;
- Call the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit our website at [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca).

## PRE-CALVING NUTRITION: MINERALS MAKE A DIFFERENCE



by Leah Clark, BSc.  
Livestock Intern, Moose Jaw  
Regional Services Branch

Feeding your cow herd a source of properly balanced minerals is essential for your herd's health.

This increases in importance from late gestation until breeding. It is during this time that we need our cows to perform at their best. They need extra nutrients to support fetal growth, lactation and fertility. The nutrient needs of a cow are highest during this period as 70 per cent of fetal growth occurs in the last three months prior to calving.

After calving, lactation continues to increase the nutrient demands of an animal. In order to reach a goal of one calf per year, a cow is expected to become pregnant within 83 days of calving. Eighty-three days is not a lot of time when you consider that it takes around 40 days after calving for the uterus to be in a condition that facilitates pregnancy. These issues are compounded in heifers as they are still growing themselves. Therefore, providing your animals with a balanced mineral will help to ensure animals are healthy and in good body condition.

When deciding on a mineral that best complements your ration, there are a few things to consider. Cows need to be supplied a ratio of calcium to phosphorus at levels of at least 1.5:1 and not higher than 7:1. Grains tend to be high in phosphorus, alfalfa hay tends to be higher in calcium, while grass hay tends to have lower levels of both. Typically, minerals are identified by the calcium to phosphorus ratio that is supplied. Remember that if you have a specific mineral imbalance in your ration, such as high selenium, custom mineral formulation is always an option.

Experience and research show that proper mineral balance is essential to maintain proper growth, fertility, immune status and overall performance. This balance can be offset by the availability of the

mineral to the animal, other minerals interfering with absorption, and the minerals supplied through feed and water. Testing both water and feed can help you to choose a mineral that complements your feed and results in better overall herd performance.

### FOR MORE INFORMATION

- Call the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca).



Supplying cows well balanced mineral is essential in any type of feeding system.







# Biosecurity: increasing production and protecting your investment



by Dr. Wendy Wilkins, DVM, PhD  
Disease Surveillance Veterinarian  
Livestock Branch

Good animal health is an essential requirement for maximizing livestock productivity and minimizing input costs. It is easy to see that tending to animal health is critical for protecting the financial investment in your livestock. Animal health starts on the farm with biosecurity. But what does biosecurity really mean and how do you apply it on your farm?

Biosecurity is how you separate your animals from anyone or anything that could carry disease. Consider these questions: Who is allowed access into your poultry barn? Can you recall who visited in the last week and month? Do you borrow machinery from your neighbour to work in your corrals? Do you bring new heifers into your herd without knowledge of their disease status? Do wild birds or farm cats get into your barns? Any of these could introduce infectious animal diseases, placing your livestock investment at risk.

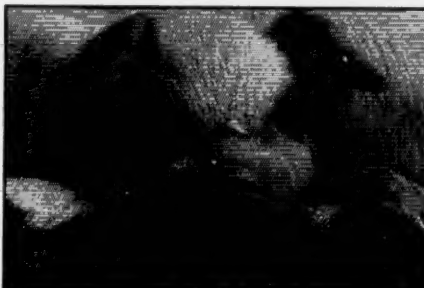
Biosecurity is about being aware of how disease can spread and taking steps to block that spread. What bacteria and viruses do you carry on

your boots or clothes when you drop by the post office or the grocery store? What do you pick up when you wander through a sales yard?

Biosecurity is about protection. All aspects of your farming operation, including livestock handling, identification, disinfection protocols, movement control as well as disease recognition and reporting, contribute to keeping your livestock safe.

Any facility where people and animals are mixed has the potential to spread disease. While farmers have the ultimate responsibility to keep disease off their farm, auction markets, show grounds, veterinary clinics and boarding or training stables must also consider biosecurity.

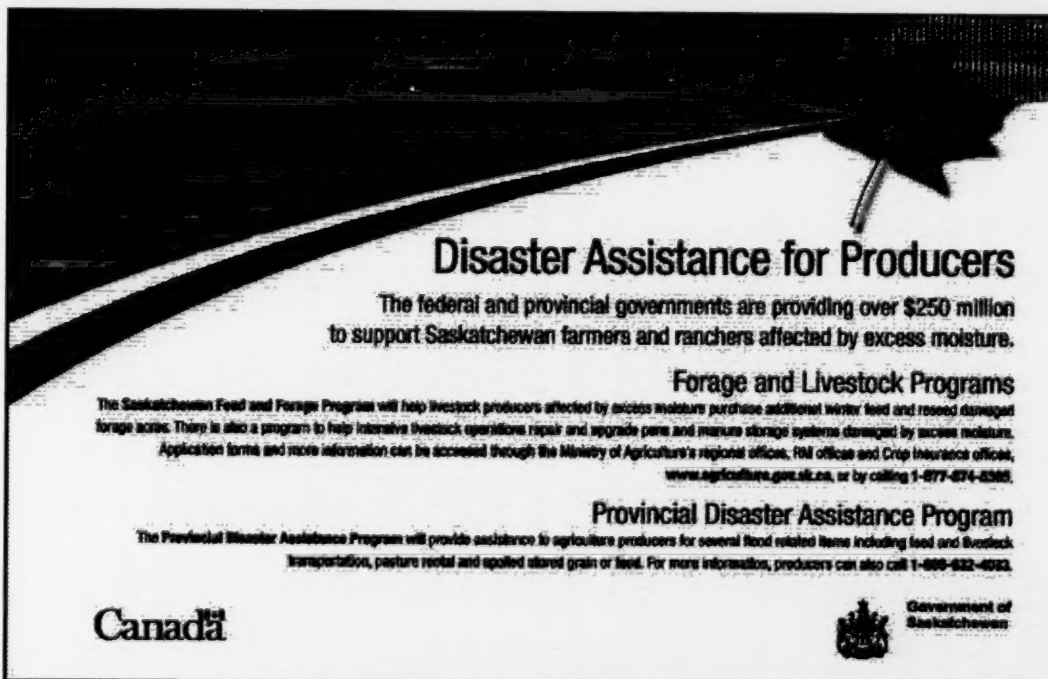
The full scope of biosecurity is indeed expansive and specific details can differ between livestock sectors. It is always important that you keep biosecurity in mind and do your part to protect your herd or flock, and by doing so, your investment and industry.



Biosecurity practices help protect livestock health.  
Photo courtesy of Scott Bauer.

## FOR MORE INFORMATION

- Contact Kathryn Ross, Animal Health Program Officer at (306) 787-5142; or
- E-mail [kathryn.ross@gov.sk.ca](mailto:kathryn.ross@gov.sk.ca).



## Disaster Assistance for Producers

The federal and provincial governments are providing over \$250 million to support Saskatchewan farmers and ranchers affected by excess moisture.

### Forage and Livestock Programs

The Saskatchewan Feed and Forage Program will help livestock producers affected by excess moisture purchase additional winter feed and reseed damaged forage acres. There is also a program to help intensive livestock operations repair and upgrade pens and manure storage systems damaged by excess moisture. Application forms and more information can be accessed through the Ministry of Agriculture's regional offices, RMI office and Crop Insurance office, [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca), or by calling 1-877-874-8388.

### Provincial Disaster Assistance Program

The Provincial Disaster Assistance Program will provide assistance to agriculture producers for several flood related items including feed and livestock transportation, pasture rental and spoiled stored grain or feed. For more information, producers can also call 1-800-622-6032.

**Canada**

**Government of Saskatchewan**





# Rehabilitating the M1 Canal

by Jason Drury, P.Eng.  
Supervisor, Asset Management Unit  
Irrigation Branch

The M1 Canal provides water for increased municipal, industrial, agricultural and environmental needs south and east of Saskatoon. The Ministry's Irrigation Branch is hard at work maintaining and rejuvenating its infrastructure.

Constructed in 1967, the canal consists of a 22.5-kilometre water supply canal that delivers water from Lake Diefenbaker to the Broderick Reservoir. This regional water system serves six reservoirs, six urban centres, three potash mines, 55,000 acres of irrigated land and 14 Ducks Unlimited Canada projects via the South Saskatchewan River Irrigation District (SSRID) and Saskatoon South East Water Supply System (SSEWSS) and now has come the time for its rehabilitation.

In 2009, the Ministry contracted an engineering consultant to develop an asset management plan for the M1. This plan recommended the complete replacement of the surface liner and water control structures as well as the rehabilitation of the culverts under the canal. A water balance study was also completed that indicated the capacity of the M1 should be increased by 50 per cent to 28 m<sup>3</sup>/second in order to address the region's anticipated increase in water demand.

The following year, the Ministry contracted the rehabilitation of the three cross drains that posed the greatest risk to the continued operation of the canal. The cross drains are culverts that allow runoff to flow underneath the canal. An entire operating season could be lost if one of these drains collapsed, but the rehabilitation of the cross drains was successfully completed by installing cured in-place plastic structural liners that are expected to increase the service life another 50 to 100 years.

In 2011, the Ministry contracted the first kilometre of the canal rehabilitation including topsoil stripping and replacement, the removal of the old surface liner, interior bank excavation and trimming, foundation construction, buried liner installation, and gravel armour supply and installation. These techniques have been successfully used in Alberta's irrigation district canals for many years.

The rehabilitated M1 Canal will give over 50 years of continued service to the SSRID and SSEWSS for the whole region's growing water needs.

## FOR MORE INFORMATION

- Contact Jason Drury, Irrigation Engineer, at (306) 867-5518; or
- Visit the Ministry website at [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca).

Figure 1: The Saskatoon South East Water Supply System is served by the M1 Canal.

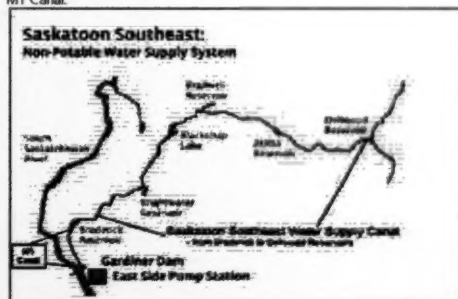


Figure 2: "Before" - deteriorated cross drain under the M1 Canal.



Figure 3: "After" - cross drain rehabilitated with cured-in-place structural liner.



Figure 4: "Before" - the deteriorated M1 Canal.



Figure 5: "After" - M1 Canal section lined and rehabilitated.





# Agricultural Crown Land Sales Program: Putting farmland back in the hands of producers

Agriculture is an evolving industry, constantly growing and changing to reflect industry values and standards, social climates and norms and technological advances.

With this in mind, the Ministry of Agriculture has a mandate to promote the sustainable and integrated use of Crown land while providing opportunities for diversification and economic growth.

In keeping with this mandate, the Government of Saskatchewan unveiled a five-year program in 2008 aimed at putting agricultural Crown land back in the hands of producers. To date, well over 300,000 acres of eligible agricultural Crown land have been sold under the Agricultural Crown Land Sales Program.

This voluntary program fulfils a commitment made in the 2007 Throne Speech. The response to this program was so favourable that on Nov. 16, 2009, the program was extended another year to ensure that all eligible Crown land lessees had an opportunity to take advantage of the initial 10 per cent discount. In the first year of this program alone, approximately 110,000 acres of agricultural Crown land returned to private ownership.

This is the first program of its kind in Saskatchewan. As an incentive to purchase their leased Crown land, lessees were offered incentives in the form of a sliding scale discount and a payment schedule guarantee option. The program further enforces the Ministry of Agriculture's belief that farmers and ranchers are the best stewards of the land. By putting control of the land back in their hands, the Ministry is investing in the future of Saskatchewan agriculture.

The Agricultural Crown Land Sale Program is now in its fourth year of operation and offers Crown land lessees a six-per-cent discount on the appraised value of eligible leased agricultural Crown land until Dec. 31, 2012. This discount is applied based on the date the lessee's application to purchase is received by the Ministry, rather than the date of the completion of sale. This ensures that lessees get the higher discount in the event the sale is not concluded until the following year. In addition, rental equivalent adjustments are available to clients whose application to purchase their leased Crown land is moderately delayed due to consultations with outside agencies or other factors. This means that although clients continue to pay rental fees on their leased Crown land, the equivalent of these rental fees is deducted from the final purchase price of the Crown land in the purchase agreement.

Applications to purchase made before Sept. 1 of a discount year will have all rental fees for the entire year applied as a rental equivalent adjustment to their final purchase price.

All agricultural Crown land lessees are eligible to participate in the Agricultural Crown Land Sale Program, however, some land may not be eligible for sale because it is reserved for other public purposes.

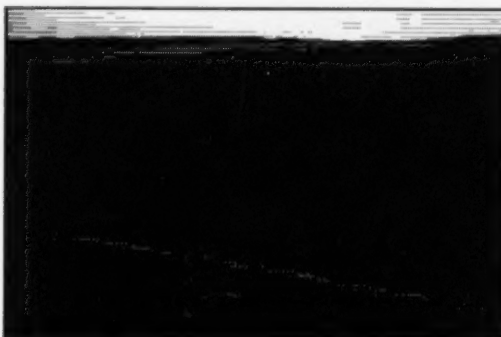
Factors that may preclude sale of agricultural Crown land include:

- Reservations under the authority of *The Wildlife Habitat Protection Act*; or environmentally sensitive lands;
- The land may contain sand and gravel, may be under active oil and gas exploration, or may have commercially harvestable timber land;
- The sale of the land may fragment other Crown holdings or may create limited access if sold, or may be situated along a major water body; or

- The land may have significant heritage value, may currently be subject to public use, or may be of value to the province for public interest.

#### FOR MORE INFORMATION

- Contact Ministry of Agriculture Regional Offices in Tisdale at (306) 878-8842; North Battleford at (306) 446-7449 or Swift Current at (306) 778-8300; or
- Visit the Ministry website at [www.agriculture.gov.sk.ca/Crown-Land-Sale-Program](http://www.agriculture.gov.sk.ca/Crown-Land-Sale-Program).



Farmers and ranchers are the best stewards of the land; putting control of the land back in their hands allows the Ministry to help move agriculture forward in Saskatchewan. Photos courtesy of Donald Fontaine.





## Innovative treatments appeal to consumer tastes for table potatoes

When buying red potatoes for the table, consumers look for a uniform, dark skin colour.

However, growers' most popular red potato is the Norland variety, the colour of which is highly variable and tends to fade during storage. A recent study by the University of Saskatchewan's Department of Plant Sciences and supported by the Saskatchewan Ministry of Agriculture's Development Fund looked for ways to enhance the colour of red-skinned potatoes like Norland to make them as popular with consumers as they are with producers.

Good genetics is the most important factor in ensuring a consistent, long-lasting dark red colour. A new variety (Peregrine Red) was released in 2002, which has a more consistent and longer-lasting colour than the Norland, but is slightly smaller, later-maturing and susceptible to common scab. For now, the Norland potato remains the industry standard.

Researchers have developed an agronomic approach to produce a good red colour in potatoes by applying a plant growth regulator (PGR)—such as a non-lethal dose of 2,4-D or the naturally occurring hormone abscisic acid (ABA)—to the foliage at the onset of flowering. A research team led by Dr. Doug Waterer looked at the effectiveness of these two treatments in enhancing skin colour.

While 2,4-D is not registered for use on potatoes as an herbicide, it has been registered in the United States since the 1950s for use in enhancing skin colour in potatoes. In May of this year, Canada's PMRA approved a similar registration for colour enhancement on red potatoes.

Dr. Waterer's new research supported the findings of previous studies, which showed that an application of 2.5 fluid ounces per acre of the low-volatility ester formulation of 2,4-D at the stage when the flower buds are just beginning to form—and another application two weeks

later—enhanced skin colour, both at the time of harvest and after extended storage. While the 2,4-D altered the appearance of the foliage, it had no consistent impact on yields. It did, however, slightly reduce the average size of the tubers. The 2,4-D also reduced the level of common scab infection, but occasionally increased the level of powdery scab.

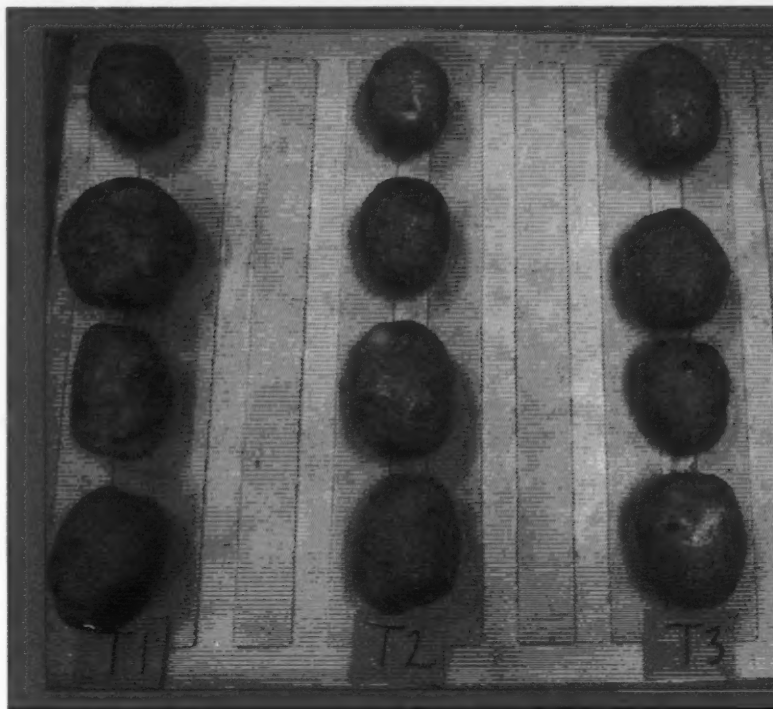
The other option is the naturally occurring ABA. Plant growers have known for years that exposure to cold will enhance the colour of red-pigmented crops by triggering the production of ABA. It was California grape growers who found that applying ABA mimicked the effect of exposure to cold. The National Research Council (Saskatoon) has developed a range of synthetic ABA analogs which have been shown to be more powerful and longer-lasting than natural ABA.

However, neither the natural nor the synthetic versions of ABA were found to have a consistent impact of the colour of red potatoes even though both had produced obvious, long-lasting changes in other test crops. The ABA treatments were also ineffective in providing scab control.

Dr. Waterer's research project and the recent approval of using 2,4-D for potato skin colour enhancement will give potato growers an opportunity to appeal to the market preferences for red potatoes.

The Agriculture Development Fund provides funding to institutions, companies and industry organizations to help them carry out research, development and value-added activities in the agriculture and agri-food sector. The results produce new knowledge, information and choices in technologies, techniques and varieties for farmers, ranchers, processors and input suppliers, to improve the competitiveness of Saskatchewan's agriculture sector.

In 2012, the Saskatchewan Ministry of Agriculture committed nearly \$11.8 million in new funding for 60 ADF research projects.



Three of the treatments are represented in this picture. The potatoes treated with 2,4-D are labeled T1, those treated with ABA are labeled T2 and untreated potatoes are T3.

Potatoes in T1 are clearly a darker red than the other potatoes. While the difference between treatments in the picture is relatively subtle, the difference is readily apparent in person. The colour enhancement from the 2,4-D is effective after extended storage as well.







# Ministry expands SAVI program

by Doris Morrow  
Manager, Farm Business Management Services  
Regional Services Branch

The Ministry of Agriculture is pleased to announce the expansion of the Saskatchewan Agri-Value Initiative (SAVI).

Projects adding value at the farm level can now be considered for funding even if they do not involve processing. Prior to this change, only small to medium-sized agri-businesses or producer/processor organizations involved in value-added processing of agricultural products were eligible to apply.

## Who is now eligible to apply for SAVI?

These changes allow any producer, processor organizations, small to medium-sized agri-businesses, producer groups, co-operative, and agriculture and food associations to apply to the SAVI program. This change now allows for both non-processing and value-added processing activities.

## How much funding is available?

Other SAVI program details remain the same. The applicant must have a business plan or complete a business assessment and action plan. Also, the applicant must highlight how the completion of the project will result in a significant economic impact.

The four eligible component areas and funding limits are as follows:

- Prototype and Product Development - \$60,000
- Marketing/Marketing Opportunities - \$40,000
- Systems Improvements - \$20,000
- Skills and Training - \$5,000 per company

Applications for the program are accepted year-round. The program requires 50 per cent matched funding from the applicant. The maximum amount that can be approved under SAVI is \$100,000.

## FOR MORE INFORMATION

- Contact your local Regional Farm Business Management Specialist;
- Call the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca).



## ON THE WEB

# ONLINE SIGN-UP PAGES NOW AVAILABLE

Signing up for the weekly Crop Report or Cattle Market update is now only a click away.

The Ministry of Agriculture recently created online sign-up pages. You can now receive Ministry updates, reports and publications straight to your e-mail. The following list outlines what is now available to you:

- Crop Report;
- Agriview;
- Cattle Market Update;
- Hog Market Report;
- Hog Market Update; and
- Crop Production News

To sign-up for any of these publications visit [www.agriculture.gov.sk.ca/sign-up](http://www.agriculture.gov.sk.ca/sign-up), the online forms are fast and easy-to-use. Simply follow the instructions and you'll be receiving Ministry updates in no time. Please note that any information the Ministry collects will be treated as confidential and not shared with any other sources.

The screenshot shows the 'Government of Saskatchewan' website with the 'AGRICULTURE' section highlighted. The main heading is 'Publication Online Sign Up Form'. Below this, there is a text box for 'Email Address' and a 'Sign Up' button. To the left, there are links for 'Crop Report', 'Agriview', 'Cattle Market Update', 'Hog Market Report', 'Hog Market Update', and 'Crop Production News'. At the bottom, there is a 'Growing Forward' logo.





## Growing Forward

## New forms for 2011 program year



As part of SCIC's effort to bring the AgriStability program closer to Saskatchewan producers, new program forms have been developed. These forms and the submission of them should help reduce the time it takes for a participant's program information to be processed.

For the 2011 program year, individuals (sole proprietors) can still file for both AgriStability and AgriInvest by using the new T1163 form. This form is available at [www.saskcropinsurance.com](http://www.saskcropinsurance.com) and is to be used for individual participants to report their relevant tax information. The T1163 should be sent to the Canada Revenue Agency (CRA) in Winnipeg, as has been done in the past.

An individual's supplementary information for the 2011 program year – such as crop or livestock inventory, deferrals, purchased inputs, accounts payable and receivable – are now to be reported on SCIC's new Supplemental Accrual Information form. This new form can be found at [www.saskcropinsurance.com](http://www.saskcropinsurance.com) and is to be submitted directly to SCIC and is **not** to be sent to the CRA in Winnipeg.

The new Supplemental Accrual Information form can be submitted to SCIC by:

- dropping it off at any of the 21 customer service offices across the province;
- mailing it to:  
Saskatchewan Crop Insurance Corporation – AgriStability  
484 Prince William Drive  
PO Box 3000,  
Melville SK S0A 2P0
- or faxing it to 1-888-728-0440.

Watch for a new feature coming soon, giving you another option for submitting your AgriStability information.

This change in form filing means SCIC is bringing another aspect of administering the AgriStability program closer to home in an effort to provide more timely, reliable and local service.

Corporations, cooperatives and other entities will continue to follow the same guidelines as in previous years. The Corporations, Cooperatives and Other Entities form is to be completed and submitted directly to SCIC.

Should you have questions about the new forms or where they are to be submitted, contact your nearest AgriStability Advisor or call the AgriStability Call Centre at 1-866-270-8450.

## SASKATCHEWAN CROP INSURANCE CORPORATION: HOW CAN WE HELP?

Customer service is something that the Saskatchewan Crop Insurance Corporation (SCIC) focuses on when you call, e-mail or visit one of our offices. We keep it in mind when we develop programs and features that would assist producers who work on a diverse range of farming operations. SCIC is committed to providing quality customer service, so much so that we have included it as a theme in our Corporate Plan: Focus on the Producer.

Still, there are many complexities surrounding the business risk management programs we deliver. While we can't make nor influence your decisions, it is our job to make sure you have the details you need to stay informed. This is why we encourage you to speak to us about any component of the AgriStability, Crop Insurance or Wildlife Damage Compensation programs. Our staff are knowledgeable about the agriculture industry in Saskatchewan and understands where you're coming from. Many of our staff are also producers. Customer service representatives and managers have experience working with the programs and its individual components. There are 21 customer service offices and head office in Melville where staff are local and are familiar with your area. We can help.

So as preparations begin for the upcoming crop year, please review your Crop Insurance contract and insurance selections. Make sure your

account is up to date. If you have any questions, please speak to your local customer service office.

We would like to invite you to schedule an appointment with us where we can discuss alternative coverage, price options, insurance selections or programs with you. Learn how these options can make a Crop Insurance package that is tailored to your individual operation. If you're comfortable with your current coverage, that's okay too. You're always welcome to drop in and say hello.

The March 31 deadline to apply, reinstate, cancel or make changes to your 2012 Crop Insurance contract is quickly approaching. Let us know if you require any information or assistance with forms or program details. Program information and tools such as a Generic Insurance Cost Calculator, used to determine generic coverage and premium, are also available online.

So how can SCIC help you today?

### FOR MORE INFORMATION

- Contact the nearest Crop Insurance office;
- Call 1-888-935-0000; or
- Visit [www.saskcropinsurance.com](http://www.saskcropinsurance.com).





## Ministry intern program develops promising young agriculture professionals



by Lee Auten  
Director  
Regional Services Branch

Entering the job market right out of university can be daunting and getting the experience you need to get that perfect job in your field of study can be challenging.

The Ministry of Agriculture recognized the value of training new graduates by starting an Agrologist Intern program in 2005. University students who have graduated within three years of their program are able to apply for Agrologist Intern positions as they become available. This program is the perfect complement to the Ministry's succession management plan and ongoing commitment to support youth entering agriculture as a career.

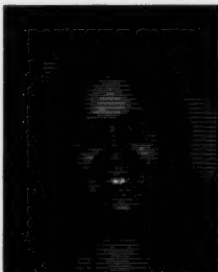
Agrologist Interns are hired for two-year terms and are positioned in locations around Saskatchewan. Intern positions are targeted to a variety of specializations such as crops, forage, livestock and farm business management. Upcoming permanent vacancies are anticipated and then the intern positions are used as training opportunities to strategically fill these vacancies. To date, 15 interns have participated in the program.

Interns are matched with a mentor in their related field where they are able to develop a broad set of skills and knowledge. Mentors are chosen for their knowledge and specialization as well as their ability to teach, coach and train. Although the Agrologist Intern positions are located within Regional Services Branch, they are also given opportunities to work across Ministry branches to gain additional experiences and help develop professional networks. Interns also use the two-year term to help achieve their Professional Agrologist designation through the Saskatchewan Institute of Agrologists.

Intern alumni include: Colby Elford, Regional Livestock Specialist, Moose Jaw; Daphne Cruise, Regional Crops Specialist, Moose Jaw; Chantal Jacobs, Provincial Organic Crop Production Specialist, Regina; Sean Miller, Integrated Pest Management Agrologist, Regina; Sarah Sommerfeld, Regional Forage Specialist, Outlook; Ian Schemenauer, Regional Crops Specialist, Outlook; Karen Smith, Land Agrologist, Tisdale. We are now proud to count them among our colleagues at the Ministry of Agriculture.

#### FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit our website at [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca).



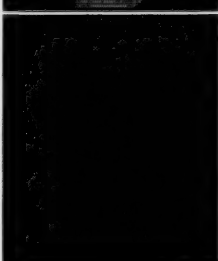
**Leah Clark, Livestock Intern Agrologist, Moose Jaw/Regina**

"I have had a wide range of experiences throughout this internship and wouldn't change anything about the people I have had the opportunity to work with and the experiences I've accumulated. This internship has given me the opportunity to work with and make an array of contacts and experiences that will be nothing but useful for me in the future."



**Shannon Friesen, Crops Intern Agrologist, Moose Jaw/Regina**

"I am constantly learning about different areas of agriculture and I find that having exposure to so many experts has increased my knowledge and awareness of different fields besides crops. I enjoy coming to work knowing that I am surrounded by people who also love what they do. The internship has been very rewarding on both a personal and a professional level."



**Diana Sambrook, Farm Business Management Intern Agrologist, Regina/Weyburn**

"The internship has offered me unique opportunities to meet staff from across the Ministry and work with many of them on different projects. This has allowed me to build my network quickly."





| DATE                   | EVENT  | LOCATION                           | PHONE          | INTERNET   |
|------------------------|--|------------------------------------|----------------|--|
| February 1, 2012       | Regional Pulse Meeting   | Swift Current, SK                  | 306-728-0533   | <a href="http://www.agriculture.gov.sk.ca/Calendar">www.agriculture.gov.sk.ca/Calendar</a> |
| February 2, 2012       | Farm Succession Planning Workshop                                      | Manitou Springs Hotel, Watrous, SK | 306-946-3214   | <a href="http://www.agriculture.gov.sk.ca/Calendar">www.agriculture.gov.sk.ca/Calendar</a> |
| February 6, 2012       | Bull Selection Workshop  | Alameda, SK                        | 1-866-457-2377 | <a href="http://www.agriculture.gov.sk.ca/Calendar">www.agriculture.gov.sk.ca/Calendar</a> |
| February 8, 2012       | Bull Selection Workshop  | Maple Creek, SK                    | 1-866-457-2377 | <a href="http://www.agriculture.gov.sk.ca/Calendar">www.agriculture.gov.sk.ca/Calendar</a> |
| February 12 - 15, 2012 | Western Barley Growers Association (WBGA) 35th Convention              | Calgary, AB                        | 403-912-3998   | <a href="http://www.wbga.org">www.wbga.org</a>   |
| February 15, 2012      | Farm Credit Corporation (FCC) Setting Goals and Taking Action Workshop | Humboldt, SK                       | 306-728-0534   | <a href="http://www.agriculture.gov.sk.ca/Calendar">www.agriculture.gov.sk.ca/Calendar</a> |
| February 15, 2012      | Farm Credit Corporation (FCC) Beef Market Outlook                      | Swift Current, SK                  | 306-728-0533   | <a href="http://www.agriculture.gov.sk.ca/Calendar">www.agriculture.gov.sk.ca/Calendar</a> |

## BREEDING FOR PROFIT - BULL SELECTION WORKSHOPS



by Bob Springer, PAg  
Regional Livestock Specialist, Swift Current  
Regional Services Branch

The most important decision a cattle producer makes is in the selection of bulls to breed his cow herd.

The influence of these bulls, be it positive or negative, will be seen in the quality of the calf crop sold the next year and in the heifers retained in the herd as replacements. One bull will contribute 50 per cent of the DNA for 30 or more calves. Given the large impact of a few bulls on their calf crop genetics, their selection warrants some thoughtful consideration.

Looking through bull sale catalogues these days can seem pretty confusing with all the EPDs for traits from birth weight to calving ease. This information, combined with growing access to genomic information and physical characteristics, is taken into account when producers make the decision to purchase their bulls.

To help cattle producers sort out this information overload and make better herd-sire selection decisions, a series of bull selection

workshops have been offered throughout the province for the last two years. They include presentations by well-respected experts on proper bull conformation, EPD interpretation, breeding soundness evaluation, application of genomic research and use of live animal ultrasound.

This year the workshops are taking place in Alameda, SK, on Feb. 6 and Maple Creek, SK, on Feb. 8, 2012. Registration is limited to 60 producers per session and the past workshops have filled quickly due to strong producer interest. Reserve your place today.

### FOR MORE INFORMATION

- Contact your Regional Livestock Specialist; or
- To pre-register for the Breeding for Profit bull selection workshops, call the Agriculture Knowledge Centre at 1-866-457-2377. Registration is \$40.

### AGENDA

|   |   |
|---|---|
| 12:00 - 12:30   | Registration, trade show booths.  |
| 12:30 - 12:35   | Welcome.  |
| 12:35 - 1:00  | There's Jingle in Genes - The Future of Genetic Selection - Using Genomics.<br>Dr. Kim McLean, PhD, AAg - Regional Livestock Specialist, Tisdale.   |
| 1:00 - 2:00   | EPDs and Other Genetic Mysteries<br>Sean McGrath, PAg - Creo Episteme Limited.  |
| 2:00 - 3:00   | Serving Your Sire - Bull Nutrition<br>Dr. John McKinnon, Professor and Beef Industry Research Chair, College of Agriculture and Bioresources, University of Saskatchewan.   |
| 3:00 - 3:15   | Break, trade show booths.   |
| <b>Concurrent Sessions (participants divided into 3 groups of 20)</b> |   |
| 3:15 - 4:00   | What's Hiding Under the Hide - Live Animal Ultrasound Demo<br>Teresa Binetruy, Beef Unit Manager, University of Saskatchewan and<br>Dr. John McKinnon, Professor and Beef Industry Research Chair, College of Agriculture and Bioresources, University of Saskatchewan. |
| 4:00 - 4:45   | The ABCs of What's Between His Knees - Breeding Soundness Evaluation<br>TBA   |
| 4:45 - 5:30   | Ribs, Nuts and Butts - Physical Characteristics of a Good Bull<br>Garner Deobald, Hodgeville SK, 2009 Canadian Western Agribition Bull Pen Alley Judge  |
| 5:30 - 5:35   | Thank you and Sponsor Recognition   |
| 5:35 - 7:30   | Steak Supper and Trade Show   |



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Agriculture

